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## Semiotic Perturbations: What The Frog's Eye Tells Us About *Finnegans Wake*

By: **Mark Nunes**

### Abstract

*Finnegans Wake* presents a semiotic dilemma for the reader: How is it that the Wake means anything? And, Why doesn't it mean everything? To gesture, somewhat metonymically, toward the Wake itself:

It is told in sounds in utter that, in signs so adds to, in universal, in polygluttural, in each auxiliary neutral idiom, sordomutics, florilingua, sheltafocal, flayflutter, a con's cubane, a pro's tutute, strassarab, ereperse and anythongue athall. [FW 117.12-16]

As such, *Finnegans Wake* lays bare the dilemma of semiotics in general: that is, the problem of signification and indeterminacy of meaning.

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## SEMIOTIC PERTURBATIONS: WHAT THE FROG'S EYE TELLS US ABOUT *FINNEGANS WAKE*

Finnegans Wake presents a semiotic dilemma for the reader: How is it that the Wake means anything? And, Why doesn't it mean everything? To gesture, somewhat metonymically, toward the Wake itself:

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As such, Finnegans Wake lays bare the dilemma of semiotics in general: that is, the problem of signification and indeterminacy of meaning.

One can certainly argue that the Wake holds a privileged position in Umberto Eco's theory of semiotics, serving as an important example of meaning-making in several of his texts. For Eco, Finnegans Wake produces a textual network of associations that makes the work's cultural and psychological context legible. The lexeme "meandertale," for example, produces other lexemes, all interconnected by a network of associations, each reinforcing the other, at the expense of other possible associative links (Limits 142). Nodes, while temporary in their arrangement, are reinforced by the actual activation of a semiotic relation--in the instance of a literary object, by the act of reading. Reading becomes a kind of "bootstrapping" in which meaning becomes increasingly determinate through a process Eco calls amalgamation. In addressing any given node within a semiotic network "the reader does not know as yet which of these virtual properties must be actualized. This decision will be helped only by further amalgamation and by textual operators" (Role 18). While Eco emphasizes that these semiotic networks place sign-functions in a temporary arrangement via a code, the articulation of a semiotic network by way of that code gives rise to a structure of increasing determination. At the same time that the network of interconnected sign-functions becomes increasingly complex as a semiotic system, as a communicative system, signification remains a linear process of increasing determination. In this sense, the communicative actualization of the text through reading amounts to a semiotic determination of linkages by way of a code.

In Eco's semiotics, then, what determines signification is the potential to convey semantic units by way of a code. To the extent that a reader "takes up" a code, that reader is involved in a communicative system, namely the text. The reader performs as a receiver, commanding and controlling sign-functions through the operation of a code that activates or represses linkages with other sign-functions. The Model Reader, then, stands not as a person per se, but rather, "a textually established set of felicity conditions...to be met in order to have a macro-speech act (such as a text is) fully actualized" (Role 11). For Eco, the semiotic process of amalgamation is an actualization of a virtual encyclopedia, or "semantic store" (Role 23). One can determine, then, according to Eco, the semiotic value of a given Wakean word not by claims to authorial intent, but by the felicity conditions that allow this network to "fire."

Eco's amalgamations describe and inscribe a process that moves from undetermined potential--a semiotic virtual--to communicative determination. But it is this linearity of determination and actualization that strikes me as problematic, specifically in reference to readings of *Finnegans Wake*, but more generally as an account of the relation between the virtual and the actual in the production of meaning. The temporal linearity of reading and speaking lends credence to an understanding of dynamic semiotic processes as spatially linear, what George Lakoff refers to as a conduit fallacy of communication. One of the main problems with this conduit view of communication is that it treats words as things, in the form of semantic units, conveyed to a receiver by way of a vehicle or medium. In effect, the concept of a lexicon, and more generally the system of language, falls victim to a second-order container fallacy, understood as a kind of holding place for this set of units, which are then pulled out and concatenated to make sense. Granted, Eco maintains that signs express transitory correlations between expression and content, articulated by a conventional code; but his emphasis on the code insures that meaning-making progresses in one particular direction, that is: toward the full actualization of the Model Reader. While this approach provides a solution of sorts to the semiotic dilemma of *Finnegans Wake* (why "meandertale" signifies something, but not everything), it does so within a context that presupposes an ideal of full and complete conveyance in the form of a full and complete actualization of the text. The question I would pose, then, would be: Can we account for the dynamic processes of meaning making, without recourse to some version of the conduit fallacy of communication?

To address this dilemma, but to avoid the linear determinations suggested by Eco's semiotics, I would like to draw on the field of autopoietic theory and apply it to semiotics in general, and more specifically to a reading of meaning-making in *Finnegans Wake*. Starting in the late 1950s, a number of researchers in the emerging field of cybernetics began to challenge the dominant computational notion of cognition--that information processing occurred through a rule-governed linear manipulation of symbols. These researchers began to formulate an image of cognition as an emergent co-functioning of interconnected neural systems (Varela et al. 85-87). Lettvin, Maturana, McCulloch, and Pitts's 1959 study of vision in frogs serves as an oft-cited landmark shift in cognitive science from computational models to connectionist models of cognition. Their research results, published in a paper entitled "What the Frog's Eye Tells the Frog's Brain," suggest that instead of producing a one-to-one correlation of the visual field's light intensity, the four parallel neural paths from the frog's eye to the frog's brain respond to specific modes of stimulation, including the (preferably jerky) movement of small, convex objects, such as flies. They conclude that rather than functioning as an input device that translates the visual field into a map of light intensities, "the eye speaks to the brain in a language already highly organized and interpreted," and does so in a way such that stimulation always occurs within an environmental context (251, 253).

Experiments with the frog's eye suggest that rather than providing a phenomenal grasping at the noumenal world, the frog's cognition is defined as a structural fit to an external environment, in which erratically moving, small convex objects signify. Humberto Maturana would build on this early work in the 1970's and 1980's to develop his autopoietic theory of cognition. Instead of defining cognition as a process whereby a living being creates or retrieves a mental representation of an "object reality," autopoietic theory understands cognition as an enactive process, in which a structural coupling between an embodied perceiver and a world "brought forth" through "perceptually-guided" action determines both potential and actual action--what I would call tentatively the structure of the virtual (Varela et al. 173). This structural coupling enacts a kind of homeostasis that delimits the perceiver as a unity with reference to its environment. The unity itself, while homeostatic, is also held in unity by its functional response to the process of being in an environment. As Maturana describes system

"unity," it amounts to a virtuality of sorts, defined by both a range of "perturbations" the system can accept, as well as a range of possible state responses to perturbation. As a system responds to an actual perturbation, it results in an actual change in state, which in turn defines a new virtuality for the system. A unity will respond to its environment through this successful redefinition of its virtuality, or it will cease to exist as a unity ("Cognition" 39). Structural coupling, then, describes a process whereby a unity successfully delimits a field of possible responses to its environment. While a given environmental perturbation (a fly flitting by and lighting on a leaf) produces an actualized state change (the flick of a tongue), such an event, also alters that system's virtuality, that is, the frog's field of possible responses to its environment.

So what, then, does the frog's eye tell us about *Finnegans Wake*?

Autopoietic theory provides a mapping of the actual and the virtual in a way that I find quite useful for overcoming both the conduit fallacy of communication and an understanding of meaning-making as an operation of semantic units drawn from a container-like lexicon. Such an approach demands that we rethink why a "polygluttural" phrase such as /anythongue athall/ signifies <<anything at all>> but not //anything at all//. From the standpoint of Eco's semiotics, unlimited semeiosis would entail a process of increasing determination of a sign series through greater control over a semiotic network. The Model Reader enacts these nodes "completely," or rather, amalgamates the virtuality of the text into an actual reading that optimizes this network of resonances: the bifurcated semantic units <<anything at all>> and <<any tongue at all>>. This amalgamation would converge with other lexemes in the sequence in which tongues and plentitude resonate (polygluttural, florilingua). Although the phrase is never fully determined, according to Eco, reading moves the sign chain in that direction. This sort of reading stands in opposition to Derrida's reading of two words in the *Wake*, in which the chain of signification always opens toward increasing indetermination. Reading, Derrida suggests, enacts a set of dissipative connections, such that any convergence (anything/any tongue) increases the virtuality of a semiotic network, rather than amalgamating actual links. In contrast to either reading of sign-chains, however, a dynamic, autopoietic model would address how semantic unities are articulated in the production of boundaries between a text system and its semiotic environment. Rather than mapping signification as a conveyance--from one sign to the next--an autopoietic semiotics would treat each enaction of meaning-making as a response that establishes a set of virtual and actual signifying potentials for a semantic unit within an environment, brought forth through a semiotic structural coupling in the form of reading.

As such, a *Wakean* phrase such as "anythongue athall" maps a virtual range of signification that is actualized at the moment of reading. Rather than thinking of this virtuality as a "semantic store," that is, as a kind of container of signification, autopoietic theory would suggest that the structure of the virtual is itself articulated at the moment of reading. To speak of a sign chain, then, would be to construct an artificial theoretical construct, since it is the semiotic environment itself that alters, through a structural coupling with each dynamic moment of meaning-making. Eco's famous network map of associations for "meandertale," then, presents as a stable structure what would amount to a singular event-response to a semiotic perturbation. The stability suggested by Eco would have more to do with homeostasis than with increasing determination. "Felicity," then, is not a measure of the increasing determination of a Model Reader, but rather, the ability of a signifying system to maintain itself in the face of semiotic perturbations, and the resulting meaning-making that occurs through the event of semiosis. As such, aberrant associations hold no different status than so-called valid associative links: either the communicative system of the text responds to the semiotic perturbation, or it collapses. Can "anythongue athall" respond to a semiotic perturbation that actualizes <<thong>> as a semantic unit, set against <<concubine>> and <<prostitute>>? Such a reading, while abhorrent

to Eco's semiotic, is nevertheless "valid" as a potential perturbation; the only limiting case in a dynamic semiotics would be the condition of homeostasis, namely the semantic unity's ability to assert its boundary within a communicative environment. Once that boundary condition has been breeched, semiosis ceases not because a chain has been broken, but because that condition of homeostasis has collapsed.

While traditional semiotics has held forth "the chain" as a spatial metaphor, a dynamic semiotic understood in autopoietic terms would best be described as a recursive loop. Peirce himself describes unlimited semiosis as "an endless series of representations, each representing the one behind it...[having] an absolute object as its limit" (qtd. in Eco, *Theory* 69). But within the framework of autopoiesis, instead of an "endless series," semiosis would be an ongoing self-adjustment that establishes a boundary condition between the object of representation and its interpretant. In Niklas Luhmann's reading of autopoiesis, actualization implies an "enforced selectivity" that creates units within the operations of a system though autopoietic recursion, and as such maps a relation between virtual operations and actualized elements and relations (82-83). In the frozen moment of analysis, one can account for a structural or systematic determination of signs as actual units, yet in process autopoiesis describes meaning making as a recursive loop--a continual rearticulation of a semiotic field of possibles within a communicative context. Furthermore, autopoietic theory would suggest that language itself is continually articulated as a virtuality with each actual, communicative enunciation.

In a dynamic semiotic, the lexeme is an event that delimits itself to define itself within a communicative context--a productive adjustment in response to a semiotic perturbation. Codes, then, would not precede signification, but rather, would be artifacts of sorts marking these moments of structural coupling. One could argue, then, that a Wakean phrase such as "gobblydumped turkery" presents a semiotic perturbation that enacts <<gobble>> and <<turkey>> as semantic unities, each defined within the other's field of possible semiotic perturbations. But in a reading of the entire passage, "Every person, place and thing in the chaosmos of Alle anyway connected with the gobblydumped turkery was moving and changing every part of the time," a dynamic semiotic must also account for a stabilization resulting in the semantic unity <<gobbledegook>>, a phrase coined by Texas Congressman Maury Maverick in 1944 (FW 118.21-23). While a coding of "authorial intention" would exclude this stabilization, Eco's guiding principle of textual coherence would suggest including such a reading since the text as a whole justifies this amalgamation. A dynamic semiotic would agree; but rather than gesturing toward a superceding cultural code, autopoietic theory would instead suggest that it is through a stabilization of resonant perturbations that the coherence of the text as a whole emerges, not the other way around. Meaning, then, maps a dynamic of this process of temporary stabilization--a homeostatic adjustment to the distress of semiosis.

The nodes that Eco sets up for a Wakean word like "meandertale" do not, then, map a code that makes the Wake culturally legible; they index an actualization of semiotic boundary conditions between these semantic unities and a communicative context. This difference in the relation between code and sign-function is an important distinction between traditional semiotics and a dynamic, autopoietic theory of meaning-making. As Peter Andersen notes, dynamic semiotics provides an explanation for how language maintains stability even though it is "distributed over millions of independent language users that ostensibly have neither the knowledge nor the practical means for controlling it" (*Dynamic* 164). Since dynamic semiotic systems are recursive, in which individual systems define their own boundary conditions based upon perturbations within a communicative context, we can no longer define language or a "semantic store" as out there; rather, it is structured as a complex attractor, displaying emergent patterns that approximate stable forms

(Andersen, "Dynamic" 175). A dynamic semiotics denies the role of superstructural codes, suggesting instead that global meaning emerges through an enacted pattern of responses to perturbations, which then recursively define a new field of possible semiotic responses. Code matters less than the pull toward stability enacted in response to a semiotic perturbation, what mathematical modeling describes as an attractor or a topological deformation (Anderson, "Dynamic" 195). Any act of reading enacts a semiotic crisis that either resolves itself through an enforced selectivity that produces stable semantic unities, or it results in a dissipation of the structural coupling between the reader and the text. In effect, as Andersen notes, "signs stabilize thoughts, not merely express them" ("Dynamic" 183-184). What resists--or allows--for the actualization of /thong/ within a reading of <<anythongue athall>> would be the pull of that sign as a stabilizing structure. And in turn, the pull of a sign toward these moments of stability becomes a measure of the virtuality enacted by the production of these semantic unities.

An autopoietic semiotics to some degree also reverses our assumptions about the relation between a communicative context and sign functions. As Andersen notes, "the perturbing environment is articulated by the perturbed system--not the other way around as one should expect" ("Semiotics" 33). If we were to carry out this concept of structural coupling to its limit, we would have to conclude that not only does the reader alter in response to the Wake, but also Finnegans Wake itself responds to these readings by altering its virtuality. As a system, the work itself produces a boundary, one that is perturbed by the reader. The Wake responds to the perturbations its environment--in this instance, the actual reading from amidst a structure of possible readings--in such a way that its responses maintain its semiotic boundaries. In doing so, autopoietic theory would suggest that the virtuality of the text shifts in relation to its environment. While it seems somewhat commonplace to declare that reading changes the reader, autopoietic theory maintains the seemingly bizarre argument that reading Finnegans Wake changes the Wake itself. It seems counter-intuitive to argue that after reading "anythongue athall" somehow that phrase has been "perturbed." OK, so I publish a piece here in HJS, read by a dozen or so Joyceans, who then encounter my reading of this passage. Perhaps then I could say that my own reading perturbs these words in a way that influences future readings. But autopoiesis suggests an even more radical idea: that if we are to consider semiotic systems as dynamic, then we must accept that the communicative environment itself is dynamic and self-reproducing as its own system. But is this claim any more audacious than the claim that language, as an emergent system, is perturbed by the language use of individual speakers? The text maintains its unity to the extent that its virtual structure allows for the semiotic perturbations of a range of readers that stand in structural coupling to the text. As such, any reading of the Wake threatens to collapse the text as a communicative system, unless the virtuality of the text can accommodate the semiotic perturbations of its reader. I need not share a single "interpretation" of the text with another reader; any felicitous reading would mean that a homeostatic adjustment toward stability has occurred, thereby restructuring the text's potential for future structural couplings and future possible readings.

If we think of the Wake as a system of codings that the reader then decodes, we are forced into a relation to semiotic processes that is likewise dependent upon a mode of coding and decoding. I suggest instead that a dynamic semiotics would treat the Wake as a process that exposes the role of perturbations in the production of meaning, as well as the necessity of a system to compensate for perturbations by reaching moments of semantic stability. Such an approach makes an effort to come to terms with the semiotic dilemma of Finnegans Wake by explaining how the text manages to mean <<anythongue athall>> without dissipating entirely as either a textual system in its own right, or a communicative context for reading.

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